Project 10.960
Part II
10 November 1955

The commodities contained in the China Special List have been examined with reference to the following questions:

1. What are the commodities on the China Special List of which China is the lowest cost producer in the Bloc?

2. What commodities on the China Special List are of high relative costs of production, even in the lowest cost producer in the Bloc?

3. What are the commodities on the China Special List for which a significant saving in delivered cost to China would be effected upon the removal of the trade embargo to China?

The results described in the paragraphs that follow are preliminary in nature and subject to change with further research. About those commodities not specifically mentioned present intelligence relating to relative costs is too slight to form the basis for even a preliminary and tentative discussion.

Questions (1) and (2) above are discussed together in part I of what follows. A consideration of relative costs of production, as they bear on problems of international trade, should pertain to total Bloc supply as it is related to total Bloc requirements. Intelligence which identifies that country which is the lowest cost producer in the Bloc serves only to indicate the direction in which the commodity would flow in intra-Bloc trade if its movements were dictated by economic consideration alone. For example,

tin is produced in the Bloc most cheaply by China; USSR tin production is of high relative cost because of poor quality ores and difficult extraction problems. Currently, however, Chinese deposits can provide only less than half of Bloc tin requirements; the remainder must come from imports or from the higher cost Soviet mines. The high cost of the marginal output implies that for trade control purposes, the entire Bloc industry should be considered of high relative cost.

Part II below considers the economic burden in terms of additional transportation forced on the Bloc by a Special China List. In this regard all commodities embargoed to China should be considered, rather than those on the present China Special List alone. For example, of total Chinese imports of petroleum products, the preponderant part is represented by commodities on the COCOM lists, for which transportation costs to China from the USSR and European Satellites are significantly higher than they would be from Indonesia or the Persian Gulf. Should such a commodity be removed from the COCOM lists, it might be desirable to keep it on a Special China List.

I. Relative Costs of Production

Antimony: Not only is China the lowest cost producer of antimony in the Bloc, but it is also one of the lowest cost producers of this metal in the world. Chinese output of antimony supplies China's needs and also a good part of the needs of the USSR. The USSR also produces antimony, although at high relative costs.

Mercury Compounds: Within the Bloc mercury metal is produced at lowest cost in China. Chinese costs are not believed to be higher than costs in the US, which is, however, a marginal producer of mercury metal in the West. Bloc requirements for the metal cannot presently be satisfied from Chinese output alone; the USSR is the marginal producer in the Bloc, and produces the metal at high relative costs. Mercury compounds are believed to be of high relative cost in the Bloc solely because of the high cost of their chief component, mercury.

Tin: China is the low cost producer of tin in the Bloc, and produces its output at average relative costs. China provides about one-half of the tin used in the Bloc, with the bulk of the remainder provided from USSR production. Since this marginal output in the Bloc is of very high relative costs, all of Bloc production must be considered of high relative costs.

Chemicals: The chemicals on the China Special List are primarily specialized chemicals for the production of which the entire Bloc has had relatively little or no capacities. Because they are produced in small quantities, if at all, they are of high relative costs in the Bloc.

II. Relative Transportation Costs

Lead and Zinc:* China's supplies of lead and zinc are shipped mainly from Poland, although to some extent East Germany ships these metals to China. If they were not embargoed to China, and if China had the means of payment, they could be obtained at a significant saving in delivered cost from Japan or Australia, each of which is capable of exporting the metals. It is estimated that transportation charges to China from Japan would be no more than one-quarter of the charges for carrying the product from Western Europe to China by water with transshipment at Gdynia. For lead and zinc the latter charge is about ten percent of the price of the product in Western Europe.

Copper:* The Free World embargo of copper to China obliges China to import copper from more distant sources and by more circuitous routes, thereby increasing the expenditures of the Bloc for transportation by an estimated $250,000. The cost of all-rail transportation from the USSR is estimated at six percent of the f.o.b. price in Western Europe, as compared with two percent for water transport from Antwerp direct to China and three percent by water with transshipment at Gdynia.

Aluminum Ingots:* If China were willing and able to import aluminum ingots freely from Western Europe, the Bloc would experience a saving of transport costs of an estimated $105,000. Transport costs via an all-rail

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* See Appendix A for the derivation of transport charges.

route from the USSR amount to about 20 percent of the f.o.b. price of aluminum in Western Europe; the costs via a direct water route from Antwerp to China would only amount to five percent of the Western European price, whereas a water route with transshipment at Gdynia would amount to seven percent of the f.o.b. price. If, however, China were to satisfy all of its current requirements for aluminum from Japan, who would be able to supply it, the transport saving would amount to about $220,000.

Petroleum Products: Nearly three-fifths of China's supplies of refined petroleum and about one-quarter of her supplies of crude oil are imported from the USSR and the European Satellites. The free-world embargo against the sale of both petroleum products to the Bloc and of the services of Western tankers in transporting petroleum products for the Bloc has forced Communist China to rely on Bloc production for the bulk of its petroleum requirements, and also on Bloc transportation facilities, which were already severely strained. It is estimated that these controls (namely, of sales of POL and tanker charter combined) currently increase the cost to the Bloc of transporting China's imports of petroleum by about $90 million * a year, from about $14 million, (the estimated transport cost if China could purchase oil in the Persian Gulf and move it to the Far East by chartered Western tanker) to $104 million (the present cost of moving the estimated 1955 volume of petroleum products shipped from the USSR to China by the far more expensive overland routes). Of this extra transportation cost forced

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* See Appendix B for the dirivation of this figure.

on the Bloc by Western controls, only about $27 million is the result of the embargo in the special China list. Refined petroleum products are embargoed to the Sino-Soviet Bloc as a whole; crude oil, however, is embargoed only to China. Thus if the entire China special list were eliminated, the saving to China on the transport of crude oil would amount to slightly more than $25 million. If, however, the embargo of all POL products to the Western Bloc were removed, but if an embargo of all POL products were maintained on a special China list, the extra transport cost forced on the Bloc would be maintained at about $90 million. In terms of current prices this is the equivalent of three million additional tons of kerosene, diesel oil and motor gas delivered in China, as composed with the 1.5 million tons of refined products which China is currently obtaining each year from both domestic production and imports.

APPENDIX A

COSTS TO CHINA AND USSR OF MOVING CERTAIN SELECTED ITEMS TO CHINESE CONSUMING CENTERS, BY DIRECT WATERBORNE MOVEMENT FROM WESTERN PORTS, TRANSSHIPMENT BY WAY OF GDYNIA, AND DIRECT ALL-RAIL MOVEMENT FROM USSR.

In comparing the costs to the Communist Bloc of supplying China with essential goods by current means, with costs under a program which would eliminate certain Western trade and shipping controls, transportation charges are the principal reason for the difference. In order to evaluate the differential, a study has been made of Chinese imports of selected, typical items, estimated regions of supply and of internal Chinese consumption, Soviet or Chinese rail hauls involved in actual movements or in movements that might take place if certain controls were relaxed, and of rail or maritime freight charges per ton now apparently being paid.

The appended table, in which conclusions and data have been embodied, indicates that for typical low or medium value dry cargo items shipment by water direct from Western European ports rather than by transshipment at Gdynia can save China $12 to $16 per ton. Direct shipment can save considerably larger sums on products having an American or Japanese origin.

For items received by an all-rail route from or through the USSR, transportation cost savings through direct waterborne movement from Western Europe to China, with subsequent rail haul inside China to the destination, can amount in typical cases to $50 to $65 per ton.

The total costs to the Communist Bloc which result from indirect means of transportation can be approximated by applying costs per ton shown here against total estimated dry cargo imports via Gdynia and via all-rail routes.

APPENDIX B

ESTIMATED SAVINGS TO BLOC COUNTRIES RESULTING FROM REMOVAL OF CONTROLS ON POL PRODUCTS

A study of the effects of removal of controls on shipments of POL products to countries of the Communist Bloc, with special reference to China, shows that such action would yield a net saving of $90,000,000 to the Communist World. This estimate is based on an estimate of 1955 POL imports by China, (1,000,000 metric tons), and the estimated economic costs to USSR and China for its transportation. Of the total Bloc saving of $90 million, China would save $45,000,000 and the USSR about $45,000,000 also. It is probable that further moderate savings would revert to the Russians on the basis of well-head and refining costs which the Chinese payment less the freight does not now cover.

If the same set of factors were applied to the shipment of about 200,000 metric tons of POL from the USSR overland to North Korea, an additional saving of between $8,000,000 and $12,000,000 would be probable, all reverting to the USSR which at the present time is subsidizing the transport of POL to North Korea.

This calculation is based on a rough estimate of actual 1955 traffic, by types, quantity, means of transport, place of origin and destination. It does not give consideration on the one hand to the reduction in length of haul which in the future can be effected in overland POL movement once

the Mongolian railroad has been put into use, nor on the other hand to Soviet distances from sources of POL more remote from the Far East than Ufa, although other oil fields are believed to be contributing to the overland movement and would have greater transport costs. It presumes that jet and aviation gasoline would still be embargoed and would move to China by rail or by sea in Bloc tankers. The latter would be available in greater number than at present if non-Bloc tankers could replace them in hauling other Bloc POL products. Also, it presumes that under such circumstances, Bloc tanker rates might come down to a level nearer that of the West, thus providing an intra-Bloc saving which would benefit the Chinese the most.

The main saving would, of course, come from the elimination of the present long overland movement which is disproportionately costly to both the USSR and China in railroad coal, man-hours and depreciation. This movement ties up resources needed for the development of the economy of both countries and frequently causes traffic delays and extra expenses. The repeated utterances of Kaganovich, Beshchev and others indicate a Soviet desire to be rid of this burden.

This study is oriented primarily toward Chinese trade and does not take into account possible savings to the USSR, should it become feasible for POL now shipped across Siberia for use in the Soviet Far East to be moved in tankers from the Black Sea. Such savings, if computed, would probably add

from $60,000,000 to $80,000,000 more to the potential savings for the USSR, limited only by the reluctance of the Russians to charter non-Bloc tankers for runs to strategic ports in the Far North and East.

Tanker construction or acquisition by the Bloc can, of course, in time reduce the losses shown, but at present the POL and tanker employment restrictions are costing China and the USSR approximately the amounts indicated annually.

ESTIMATED SAVINGS TO CHINA AND THE USSR WHICH WOULD RESULT FROM REMOVAL OF CONTROLS ON ALL POL PRODUCTS FOR CHINA EXCEPT AVGAS AND JET FUEL
(1955 basis)

	Estimated Tonnage	Savings to China	Savings to USSR
Crude	300,000 M.T.	$12,000,000	$15,000,000
Products	665,000 M.T.	32,000,000	22,000,000
Avgas and Jet fuel *	135,000 M.T.	1,000,000	8,000,000
	1,100,000 M.T.	$45,000,000	$45,000,000

* In the case of avgas and jet fuel it was assumed that China would pay the ocean freight, even if delivered in Bloc tankers.

NOTE: The above calculations do not include corresponding potential savings to the USSR of from $8,000,000 to $12,000,000 on shipments of POL to North Korea, and of $60,000,000 to $80,000,000 on shipments of POL across Siberia to Soviet Far Eastern and Northern regions.

Transportation (

Estimated Mode of Shipment	Commodity	Cost per M Tons Of Product Free World Market	Ocean Freight Antwerp/China	Ocean Freight Antwerp/Gdynia	Ocean Freight Gdynia/China	Pre Inland on al
						Distan
	Copper Wire Bars	$1,050 1/				
Water to China Proper (75%)	Costs if sent Antwerp/China direct		$22.99 W 3/	--	--	38 k
	Costs if sent Antwerp/Gdynia/China		--	$10.91	$24.88	38
Rail to Manchuria (25%) 4/	Costs all-rail from USSR source		--	--	--	1,265
	Costs if all-rail shifted to water/rail		22.99			--
	Copper Wire	1,275	--			
Water to China Proper (75%)	Costs if sent Antwerp/China direct		19.78 W M 3/	--	--	38
	Costs if sent Antwerp/Gdynia/China		--	14.00	21.67	38
Rail to Manchuria (25%) 4/	Costs if all-rail from USSR		--	--	--	1,265
	Costs if all-rail shifted to water/rail		19.78	--	--	--
	Lead Ingots	308				
Water to China (95-100%)	Costs if sent Antwerp/China direct		17.01	--	--	--
	Costs if sent Antwerp/Gdynia/China		--	10.91	18.90	--
	Zinc Sheets	335				
Water to China (95-100%)	Costs if sent Antwerp/China direct		18.27	--	--	--
	Costs if sent Antwerp/Gdynia/China		--	14.00	20.16	--
	Aluminum Ingots	475				
Water to China (80%)	Costs if sent Antwerp/China direct		22.99	--	--	--
	Costs if sent Antwerp/Gdynia/China		--	10.91	24.88	--
Rail to Manchuria (20%)	Costs if all-rail from USSR		--	--	--	1,683
	Costs if all-rail shifted to water/rail		22.99	--	--	--
	Acetic Acid, 98% in drums	255				
Water to China (@ 95 plus %)	Costs if sent Antwerp/China direct		28.35	--	--	80
	Costs if sent Antwerp/Gdynia/China		--	14.00	30.24	80
	Costs if sent Japan/China	(est. $255)	11.20 5/	--	--	--
	Carbon Black	250				
Water to China @ 95 plus %)	Costs if sent Antwerp/China direct		18.27	--	--	81
	Costs if sent Antwerp/Gdynia/China		--	14.00	20.16	81
	Costs if sent Houston/China direct	(est $175)	23.50 6/	--	--	81

1. London prices September 1955 on all items.
2. All interior Chinese rail traffic costs computed at 1.3 cents per ton-kilometer.
3. W: rate per metric ton. W/M: rate per metric ton or one cubic meter at ship's option.
4. In 1955 consumption in Manchuria and receipts from USSR about coincided for these two items.
5. Kobe/Shanghai
6. Houston-Shanghai direct.

Borne by China

China Freight pments	Probable Future China Inland Rail Freight on Shipments Diverted to Water/Rail		Freight Cost per Ton to China	Transportation Costs to Others (USSR) Inland Rail Haul Producing Center to Otpor on Items Sent All-Rail			Total Transport Cost USSR and China	Saving if Western Ships used in Direct Haul	Est. Approx. Volume of Imports (1954)
									(Tons)
Cost	Distance	Cost		Distance	Rate	Cost			
									2,500
$0.49 2/	--	--	$23.48	--		--	$23.48	--	
0.49	--	--	36.28	--		--	36.28	$12.80	
16.45	--	--	16.45	4,531	$0.015	$67.97	84.42	--	
--	617	$8.02	31.01	--		--	31.01	53.41	
									7,500
0.49	--	--	20.27	--		--	20.27	--	
0.49	--	--	36.16	--		--	36.16	15.89	
16.45	--	--	16.45	4,531	0.015	67.97	84.42	--	
--	617	8.02	27.80	--		--	27.80	56.62	
									3,500
--	--	--	17.01	--		--	17.01	--	
--	--	--	29.81	--		--	29.81	12.80	
									2,000
--	--	--	18.27	--		--	18.27	--	
--	--	--	34.16	--		--	34.16	15.89	
									8,000
--	--	--	22.99	--		--	22.99	--	
--	--	--	35.79	--		--	35.79	12.80	
21.88	[illegible]	[illegible]	21.88	4,531	0.015	67.97	89.85	--	
--	199	2.59	25.58	--		--	25.58	64.27	
									N A
1.04			29.39	--		--	29.39		
1.04			44.28	--		--	44.28	(14.89)	
--			11.20	--		--	11.20	33.08	
									N A
.05			19.32	--		--	19.32	(15.89	
.05			35.21	--		--	35.21	5.66 plus 75.00*	
.05			29.55	--		--	29.55 *	equal $80.66)	

* (but may save $75.00 on cost of goods.)